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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,324	03/24/2004	Klaus-Dieter Mueller	Q80058	4021
23373	7590	12/16/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			CHARIOUI, MOHAMED	
			ART UNIT	PAPER NUMBER
			2857	

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/807,324

Applicant(s)

MUELLER ET AL.

Examiner

Mohamed Charioui

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/24/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-9** are rejected under 35 U.S.C. 102(b) as being anticipated by Piety et al. (U.S. 5,965,819).

**As per claims 1 and 9**, Piety et al. teach a coupler to sensors that are; provided for detecting vibration of the test object and converting the detected vibration into analog vibration signals (see col. 2, lines 14-46); an amplifier configured to adjust the amplitude of the analog vibration signals and a low-pass filter configured to at least reduce aliasing effects in the analog vibration signals (see col. 5, lines 10-15 and col. 7, lines 50-65); an analog-to-digital converter configured to convert the analog vibration signals into digital signals (see col. 2, lines 26-59 and col. 5, lines 40-50); and a computer configured to analyze the vibration and to evaluate the digital signals (see col. 6, lines 23-33); wherein the coupler, the amplifier, the low-pass filter, the analog-to-digital converter and the computer are combined in a compact mobile unit in a series connection, and the sensors are integrated into the compact mobile unit (see col. 2, lines 15-25).

**As per claims 2 and 3**, Piety et al. further teach that the system comprises at least one of a digital input and a digital output as a connection from the computer to a

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mechanism for mechanical pulse excitation of the test object (see col. 3, line 64 to col. 4, line 13; col. 5, lines 40-61; and col. 4, lines 49-65).

**As per claim 4**, Piety et al. further teach that the system comprises at least one power supply configured to supply power to the sensors (see col. 6, lines 64 to col. 7, line 6).

**As per claims 5-8**, Piety et al. further teach a communications interface connecting the computer to an external operator control and monitoring system (see col. 6, lines 1-10).

#### **Prior art**

2. The prior art made record and not relied upon is considered pertinent to applicant's disclosure:

**Dister et al. ['735]** disclose machine diagnostic system and method for vibration analysis.

**Hernandez ['422]** discloses method and apparatus for analyzing and detecting faults in bearings and other rotating components that slip.

**Thomas et al. ['683]** disclose acoustic detection of contact between cutting tool and workpiece.

**Sonnichsen et al. ['945]** disclose detecting anomalies in rotating components.

**Kobayashi et al. ['080]** disclose vibration/noise control system.

#### **Contact information**

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohamed Charioui whose telephone number is (571)

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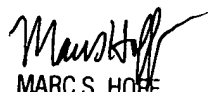
272-2213. The examiner can normally be reached Monday through Friday, from 9 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S Hoff can be reached on (571) 272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mohamed Charioui

12/9/04

  
MARC S. HOFF  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800